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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,507	01/02/2002	Mathilde Benveniste	2000-0611 CIP	8744
26652	7590	06/28/2005	EXAMINER	
AT&T CORP. P.O. BOX 4110 MIDDLETOWN, NJ 07748			TON, DANG T	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/032,507	Applicant(s) BENVENISTE, MATHILDE	
	Examiner DANG T. TON	Art Unit 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22, 25-41 and 44-97 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 16-22, 25-41, 44-65, and 72-80 is/are rejected.
- 7) ☒ Claim(s) 2, 4-15, 66-71 and 81-97 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1, 3, 26, 28, 35, 39, 41, 44, 45, 50, 64, 65, 37, 47, and 49 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 9, 11, 39, 41, 48, 52, 54, 57, 58, 64, 84, 85, 50, 60 and 62, respectively of copending Application No. 09/985,257. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

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Claims 1,3,26,28,35,39,41,44,45,50,64,65,37,47, and 49 are identical to the claims 9, 11, 39, 41,48 ,52 ,54 ,57 ,58 ,64, 84, 85,50,60,and 62, respectively, of copending Application No. 09/985,257.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 16-22, 25, 27, 29, 30-34, 36, 38, 40, 46, 48, 51-63, 72-80, and 83 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9, 33, 36, 38, 40, 42, 44, 46, 47, 49, 53, 59, 61, 67-83, 86, 88-95, respectively of copending Application No. 09/985,257 Although the conflicting claims are not identical, they are not patentably distinct from each other because.

The claims 9, 33, 36, 38, 40, 42, 44, 46, 47, 49, 53, 59, 61, 67-83, 86, 88-95 of the copending application 09/985,257 discloses a method for a distributed medium access protocol that schedules transmission of different types of packets on a channel based on a service quality specification for each type of packet, comprising the steps of:

determining at a plurality of nodes in the access network, an urgency class of pending packets according to a scheduling algorithm; and transmitting pending packets in a given urgency class before transmitting packets of a lower urgency class ;

remembering the number of transmission attempts by a node

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for the last transmission of same node; estimating from the number of transmission attempts the current congestion experienced; and adjusting a backoff counter to current congestion levels to provide a dispersion of packet traffic bursts;

determining at a plurality of nodes in the access network, an urgency class of pending packets according to a scheduling algorithm; using class-differentiated arbitration times, as idle time intervals required before transmission is attempted following a busy period on the medium; and assigning shorter arbitration times to higher urgency classes;

differentiating packets into additional urgency classes for packets assigned the same arbitration time; and using different contention resolution mechanisms, thus yielding hybrid packet prioritization;

the arbitration times of two different urgency classes being at least equal to an arbitration-time increment necessary for a station to discern that another station has seized a channel;

adjusting backoff probability functions in real time based on congestion estimates derived from a number of re-transmissions attempted by a node;

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adjusting backoff probability functions in real time based on congestion estimates derived from a number of re-transmissions attempted by each of its neighbor nodes;

adjusting backoff probability functions in real time based on class-specific congestion estimates derived from a number of re-transmissions attempted by a node;

adjusting backoff probability functions in real time based on class-specific congestion estimates derived from a number of re-transmissions attempted by each of its neighbor nodes;

adjusting backoff probability functions in real time based on congestion estimates derived from a number of re-transmissions attempted by a node;

adjusting backoff probability functions in real time at a node based on congestion estimates derived from the time spent by packets waiting for transmission;

adjusting backoff probability functions in real time at a node based on congestion estimates derived from the time spent by packets waiting for transmission at each of its neighbor nodes;

adjusting backoff probability functions in real time at a node based on class-specific congestion estimates derived from the time spent by packets of different classes waiting for transmission at each of its neighbor nodes;

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further differentiating packets into urgency classes based on probability density functions of backoff counters whose superposition yields a uniform composite density function, thus achieving efficient dispersion of contending stations' backoff time;

further differentiating packets into urgency classes based on different persistence probabilities, by which permission is granted for transmission, for different packets that are assigned the same urgency arbitration time;

determining in a first wireless station a first urgency class of data having a low QoS priority;

assigning a first class-differentiated urgency arbitration time to the data having a lower QoS priority; determining in a

second wireless station a second urgency class of data having a high QoS priority; assigning a second class-differentiated

urgency arbitration time shorter than the first time, to

the data having a higher QoS priority; and transmitting from the second wireless station pending packets in the second

urgency class before transmitting from the first wireless station pending packets in the first urgency class;

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the urgency classes each have a corresponding urgency arbitration time that must expire before starting a random backoff interval for packets assigned to that urgency class; assigning a longer urgency arbitration time to file transfer data with a lower QoS priority; and assigning a shorter urgency arbitration time to voice and video data with a higher QoS priority;

the random backoff interval is calculated based on a contention window range which has an initial lower value and an initial upper value, which are functions of the urgency class;

the random backoff interval is selected randomly from a statistical distribution, whose mean and variance are set adaptively in response to an observed traffic intensity;

differentiating between different urgency class transmissions with class-specific urgency arbitration times;

differentiating between different urgency class transmissions with class-specific parameters of the probability distribution used to generate random backoff times and class-specific backoff retry adjustment functions;

differentiating between different urgency class transmissions with class-specific packet age limits;

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differentiating between different urgency class transmissions with a persistence factor, $Pf.sub.i$, that is different for each class, which is used to multiply a backoff window from which backoff counters will be drawn randomly upon transmission retrial;

differentiating between different urgency class transmissions with a new backoff range determined by traffic congestion estimates;

the congestion estimates are derived from data that include feedback on success or failure of a transmission attempt;

the congestion estimates are derived from data that include feedback on a number of re-transmissions attempted by a node;

the congestion estimates are derived from data that include feedback on a number of re-transmissions attempted by neighbor nodes;

the congestion estimates are derived from data that include feedback on age of retrials of transmissions attempted;

the congestion estimates are derived from data that include feedback on attempted transmissions provided in reservation messages;

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the congestion estimates are derived from data that include feedback on attempted transmissions provided in request to send and clear to send messages;

the congestion estimates are derived from data that include feedback on attempted transmissions provided in headers of transmitted packets;

employing a backoff countdown procedure for random channel access; monitoring the traffic continuously and providing feedback to the MAC sublayer of contending nodes; and adjusting the parameters of a random distribution from which the backoff counter is drawn upon initiation of a transmission attempt for each of a plurality of contending nodes to reflect current congestion levels;

which further comprises: adjusting a backoff counter of each of a plurality of backlogged nodes to reflect current contention levels in time intervals shorter than required for the completion of a transmission attempt; and adjusting such backoff counters in a way that enables older packets to be transmitted before newer ones with high probability, thus minimizing the latency jitter;

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which further comprises: obtaining traffic intensity measurements continuously and providing feedback to the MAC sublayer of contending nodes;

which further comprises: obtaining feedback on the success status of transmissions and channel idle time continuously and providing such feedback to the MAC sublayer of contending nodes;

which further comprises: employing feedback information to estimate the expected number of backlogged nodes; and using such estimate for the purpose of backoff-related adjustments; employing feedback information to estimate the expected number of backlogged nodes; and using such estimate for the purpose of backoff-related adjustments;

employing a wireless channel; and performing the monitoring of the channel at the access port;

employing a wireless channel; and performing the monitoring of the channel at each of the contending nodes;

determining system-wide adjustments at the access port; and supplying such adjustments to all nodes; and

which further comprises: adjusting such backoff counter so that the relative ordering is preserved.

NOTE; See 9,33,36,38,40,42,44,46,47,49,53,59,61,67-83,86,88-95 of the copending application.

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For Claims 25, 27, 29, 30-34, 36, 38, 40, 46, 48, 51-63, 72-80, and 83 , applicant's claims merely broaden the scope of copending application 09/985,257 claims 33, 36, 38, 40, 42, 44, 46, 47, 49, 53, 59, 61, 67-83, 86, 88-95 of the copending application by eliminating the terms " following a busy period on the medium " from claims 31 and 38 of the copending application; " parameters" from claim 86; and " priority" from the claim 67 of the copending application. It has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ 184 (CCPA). Also note Ex Parte Raine, 168 USPQ 375 (bd. App. 1969); omission of a reference element whose function is not need would be obvious to one skilled in the art.

For claims 16-22, the claim 9 of the copending application discloses all the subject matter of the claimed invention with the exception of applying the method to wireless or cellular, or TDMA and applying backoff prior to attempting any transmission in a communications network. However, the applying the method to wireless or cellular, or TDMA and applying backoff prior to attempting any transmission are well-known in the art. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use applying the method to

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wireless or cellular, or TDMA and applying backoff prior to attempting any transmission in the claim 9 of the copending application . Applying the method to wireless or cellular, or TDMA and applying backoff prior to attempting any transmission can be implemented into the method/network of claim 9 of the copending application since it does teach backoff and packets. The motivation for applying the method to wireless or cellular, or TDMA and applying backoff prior to attempting any transmission being that it provides cellular packet and prevents collision in the network.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 2,4-15 ,66-71, and 81-97 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Applicant's arguments with respect to claims 1-22,25-41,and 44-97 have been considered but are moot in view of the new ground(s) of rejection.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANG T. TON whose telephone number is 571-272-

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3171. The examiner can normally be reached on MON-WED, 5:30 AM-6:00 PM and
Thur 5:30-9:30 A.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RAO SEEMA can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. Ton



DANG TON
PRIMARY EXAMINER